

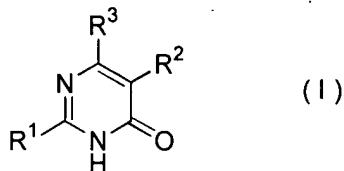
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12: (Canceled)

Claim 13: (Currently Amended) A method for therapeutic treatment of a disease caused by tau protein kinase 1 hyperactivity, which comprises administering to a patient a therapeutically effective amount of a substance selected from the group consisting of a pyrimidone ~~derivative compound~~ represented by formula (I) or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof:



wherein

R¹ represents a group represented by -N(R⁴)-W-R⁵ wherein

R⁴ and R⁵ independently represent a hydrogen atom, a C₁-C₁₈ alkyl group

which may be substituted, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-

C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may

be substituted, or a C₆-C₁₄ aryl group which may be substituted, and

symbol "W" represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

R² represents a hydrogen atom, hydroxyl group, an unsubstituted C₁-C₈ alkyl group, a C₃-C₈ alkenyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R³ represents a pyridyl group which may be substituted.

Claim 14: (Previously Presented) The method according to claim 13, wherein the disease is a neurodegenerative disease.

Claim 15: (Currently Amended) The method according to claim 13, wherein the disease is selected from the group consisting of Alzheimer disease, ~~ischemic cerebrovascular accidents, Down syndrome, cerebral bleeding due to cerebral amyloid angiopathy, progressive supranuclear palsy, subacute sclerosing panencephalitic parkinsonism, postencephalitic parkinsonism, pugilistic encephalitis, Guam parkinsonism-dementia complex, Lewy body disease, Pick's disease, corticobasal degeneration and frontotemporal dementia.~~

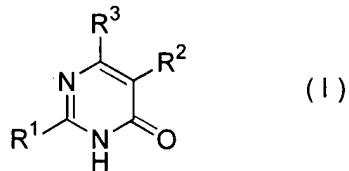
Claim 16: (Previously Presented) The method according to claim 15, wherein the disease is Alzheimer disease.

Claim 17: (Previously Presented) The method according to claim 13, wherein R² represents a hydrogen atom and R³ represents a 4-pyridyl group which may be substituted.

Claim 18. (Previously Presented) The method according to claim 13, wherein R² represents an unsubstituted, linear C₁-C₈ alkyl group.

Claims 19-24 (Canceled)

Claim 25: (Currently Amended) The method of inhibiting tau protein kinase 1 which comprises administering to a mammal a therapeutically effective amount of at least one pyrimidone derivative compound represented by formula (I) or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof



wherein

R¹ represents a group represented by -N(R⁴)-W-R⁵ wherein

R⁴ and R⁵ independently represent a hydrogen atom, a C₁-C₁₈ alkyl group which may be substituted, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl group which may be substituted, and

symbol “W” represents a single bond, a carbonyl group, a sulfonyl group,

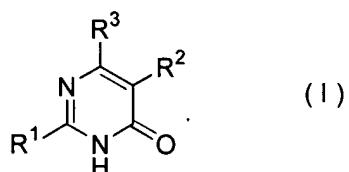
or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

R² represents a hydrogen atom, hydroxyl group, an unsubstituted C₁-C₈ alkyl group, a C₃-C₈ alkenyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R³ represents a pyridyl group which may be substituted.

Claim 26. (Previously Presented) The method according to claim 25, wherein R² represents an unsubstituted, linear C₁-C₈ alkyl group.

Claim 27: (Currently Amended) A pyrimidone derivative compound represented by formula (I) or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof:



wherein

R¹ represents a group represented by -N(R⁴)-W-R⁵ wherein

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R^4 represents a hydrogen atom;

R^5 represents a C₁-C₁₈ alkyl group which may be substituted, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl group which may be substituted, and

symbol "W" represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

R^2 represents a hydrogen atom, hydroxyl group, an unsubstituted, linear C₁-C₈ alkyl group, a C₃-C₈ alkenyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R^3 represents a 4-pyridyl group which may be substituted.

Claim 28: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 27 wherein R⁵ represents a C₁-C₁₈ alkyl group substituted with a C₆-C₁₀ aryl.

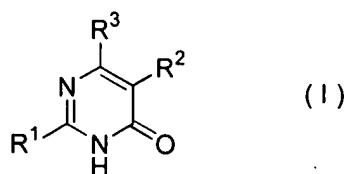
Claim 29: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 27 wherein R² represents a hydrogen atom, an unsubstituted, linear C₁-C₈ alkyl group, or a halogen atom.

Claim 30: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 29 wherein R² represents a hydrogen atom.

Claim 31: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 27 wherein the symbol “W” represents a single bond or a carbonyl group.

Claim 32: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 31 wherein the symbol “W” represents a single bond.

Claim 33: (Currently Amended) A pyrimidone derivative compound represented by formula (I) or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof:



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wherein R¹ represents a group represented by -N(R⁴)-W-R⁵ wherein

R⁴ represents a hydrogen atom, a C₁-C₁₈ alkyl group which may be substituted, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl group which may be substituted,

R⁵ represents an alkyl group which may be substituted, said alkyl group being one of ethyl group, n-propyl group, isopropyl group, n-butyl group, isobutyl group, sec-butyl group, tert-butyl group, n-pentyl group, isopentyl group, neopentyl group, 1,1-dimethylpropyl group, n-hexyl group, isoheptyl group, a linear or branched heptyl group, octyl group, nonyl group, decyl group, undecyl group, dodecyl group, tridecyl group, tetradecyl group, pentadecyl group or octadecyl group, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl group which may be substituted, and

symbol “W” represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

R² represents a hydrogen atom, hydroxyl group, an unsubstituted, linear C₁-C₈ alkyl group, a C₃-C₈ alkenyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio

group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R³ represents a 4-pyridyl group which may be substituted.

Claim 34: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 33 wherein R² represents a hydrogen atom, an unsubstituted, linear C₁-C₈ alkyl group, or a halogen atom.

Claim 35: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 34 wherein R² represents a hydrogen atom.

Claim 36: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 33 wherein the symbol “W” represents a single bond or a carbonyl group.

Claim 37: (Currently Amended) The pyrimidone derivative compound or the pharmaceutically acceptable salt thereof, or the solvate thereof, or the hydrate thereof according to claim 36 wherein the symbol “W” represents a single bond.

Claim 38: (Currently Amended) The pyrimidone derivative compound or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof according to claim 33 wherein R¹ represents N,N-diethylamino group, N,N-dipropylamino group, N-benzyl-N-methylamino group, N-isobutyl-N-methylamino group, N-benzylamino group, N-(3-hydroxypropyl)amino group, N-cyclohexylmethylamino group, N-phenylamino group, N-(4-ethylphenyl)amino group, N-(3-bromophenyl)amino group or N-(3-methoxyphenyl)amino group.

Claim 39: (Currently Amended) A pyrimidone derivative compound which is selected from the group consisting of:

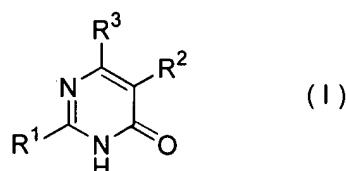
2-(N-phenylamino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N,N-diethylamino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N,N-dipropylamino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-benzylamino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-benzyl-N-methylamino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-(3-bromophenyl)amino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-(4-ethylphenyl)amino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-(3-methoxyphenyl)amino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-cyclohexylmethylamino)-6-(4-pyridyl)pyrimidin-4-one, and
2-(N-isobutyl-N-methylamino)-6-(4-pyridyl)pyrimidin-4-one,

or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof.

Claim 40: (Currently Amended) A pharmaceutical composition comprising as an active ingredient a substance selected from the group consisting of the pyrimidone derivatives compound or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof according to claim 27.

Claim 41: (Currently Amended) A pharmaceutical composition comprising as an active ingredient a substance selected from the group consisting of the pyrimidone derivatives compound or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof according to claim 33.

Claim 42: (New) A method for therapeutic treatment of Alzheimer disease, which comprises administering to a patient a therapeutically effective amount of a substance selected from the group consisting of a pyrimidone compound represented by formula (I) or a pharmaceutically acceptable salt thereof, or a solvate thereof or a hydrate thereof:



wherein

R¹ represents a group represented by -N(R⁴)-W-R⁵ wherein

R⁴ and R⁵ independently represent a hydrogen atom, a C₁-C₁₈ alkyl group which may be substituted, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl group which may be substituted, and

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symbol "W" represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

R² represents a hydrogen atom, hydroxyl group, an unsubstituted C₁-C₈ alkyl group, a C₃-C₈ alkenyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R³ represents a pyridyl group which may be substituted.